Park@DCU: an online resource for car parking at multiple DCU campuses

Each of the major DCU campuses has a limited number of available car parking spaces. An annual challenge is the lack of parking availability at busy times of semester which is increasing now we are a multi-campus university. You are tasked with building an online system to identify the best locations and currently available parking spaces across three DCU campuses - Glasnevin, St Patricks and DCU alpha.

The system comprise the following parts:

- Backend SQL database containing information about available car parks and historical parking patterns
- Utilising a web service to get real time, up-to-date car park occupancy
- A Django-based web interface to enable people to find information about where they can park and when the best times are to find parking on various campuses.

The Learning Outcomes from this module are to improve student familiarity and competence with an integrated software project based on an instance of Agile planning, specifically:

- Programming build tools and deployment environment
- Testing
- Integration
- Software process
- UI design
- Client presentation

CA377 is divided into 6 assignments plus setup activity.

A0. Git [2.5%]
A1. Database design and implementation [15%]
A2. Webservice access [15%]
A3. Integration [15%]
A4. Deploy and test [15%]
A5. UI design [15%]
A6. Final handover [15%]

The remaining 7.5% of the marks for this module will be allocated for the implementation of one of three possible extra functionalities: a specific mobile interface; integration of extra data from external sources or an example of a particularly advanced UI.

Dr Jennifer Foster and Dr Suzanne Little will be acting as your clients on this project. The module will be run as though you have been tasked with designing and implementing the Park@DCU application for DCU. Regular briefings will be held with your clients where requirements will be presented and technologies discussed. These meetings are compulsory, attendance will be taken and marks may be allocated. You will have regular submissions to reassure your clients about the project's progress.

Briefing Meeting	Target Functionality	Submission Date
Sep 18th 2017, 9:30am	A0: Git	Sep 25th 2017, 11am
Sep 26th 2017, 11am	A1: Database	Oct 9th 2017, 11am
Oct 10th 2017, 11am	A2: Web service access	Oct 23rd 2017, 11am
Oct 31st 2017, 11am	A3: Integration	Oct 30th 2017, 11am
Nov 14th 2017, 11am	A4: Deploy & test	Nov 13th 2017, 11am
Nov 28th 2017, 11am	A5: UI design	Nov 27th 2017, 11am
Nov 28th 2017, 11am	A6: Final handover	Dec 8th 2017, 5pm

Gitlab
http://gitlab.computing.dcu.ie
https://gitlab.computing.dcu.ie/slittle/2018-ca377-master-parkatdcu

The project will be hosted and managed via GIT using the School of Computing gitlab server. Information about the module, source files and templates will be provided on gitlab in the repository `2018-ca377-master-parkatdcu` and on the associated wiki page. You will each have a private repository, forked from this project, containing your code that will be automatically captured on Mondays and this will be used to evaluate your project for each of the target functionalities. Therefore **submission times are absolute** and cannot be altered. Detailed instructions and guidelines will be given at the associated briefings.

Contact
Lab sessions will be held on Mondays from 9am to 11am and Tuesdays from 10am to 12noon. Students are expected to work independently in this module as it is a project module and 100% continuously assessed. Not all skills will be taught and additional self-directed learning will be required. Where necessary we will communicate with you via your official DCU email address - please check this regularly. If you have questions please **email both lecturers.**.

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Suzanne Little: suzanne.little@dcu.ie

Project information page (check frequently for news and updates):
https://gitlab.computing.dcu.ie/slittle/2018-ca377-master-parkatdcu/wikis/home